



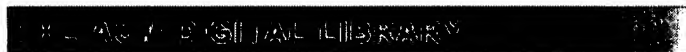
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Relevance scale ☐ ☐ ☐ ☐ ☐**1** [Melodic matching techniques for large music databases](#)

Alexandra Uitdenbogerd, Justin Zobel

October 1999

Proceedings of the seventh ACM international conference on Multimedia (Part 1) MULTIMEDIA '99

Publisher: ACM Press

Full text available: pdf(1.24 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

With the growth in digital representations of music, and of music stored in these representations, it is increasingly attractive to search collections of music. One mode of search is by similarity, but, for music, similarity search presents several difficulties: in particular, for melodic query support, deciding what part of the music is likely to be perceived as the theme by a listener, and deciding whether two pieces of music with different sequences of notes represent the same theme. In ...

2 [Music: Approximate matching algorithms for music information retrieval using vocal input](#)

Richard L. Kline, Ephraim P. Glinert

November 2003

Proceedings of the eleventh ACM international conference on Multimedia MULTIMEDIA '03

Publisher: ACM Press

Full text available: pdf(165.02 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Effective use of multimedia collections requires efficient and intuitive methods of searching and browsing. This work considers databases which store music and explores how these may best be searched by providing input queries in some musical form. For the average person, humming several notes of the desired melody is the most straightforward method for providing this input, but such input is very likely to contain several errors. Previously proposed implementations of so-called *query-by-humm* ...

Keywords: *music information retrieval, query by humming***3** [Reception and posters: Music scale modeling for melody matching](#)

Yongwei Zhu, Mohan Kankanhalli

November 2003

Proceedings of the eleventh ACM international conference on Multimedia MULTIMEDIA '03

Publisher: ACM Press

Full text available: pdf(285.77 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Several time series matching techniques have been proposed for content-based music retrieval. These techniques have shown to be robust and effective for music retrieval by acoustic inputs, such as query-by-humming. However, due to the key transposition issue, all the current methods need to search a large space for the proper key in melody matching. This computation can be prohibitive for a practical music retrieval system with a large database. In this paper, we present a music scale modeling to ...

Keywords: *content-based music retrieval, music scale, query-by-humming***4** [Manipulation of music for melody matching](#)

Alexandra L. Uitdenbogerd, Justin Zobel

September 1998

Proceedings of the sixth ACM international conference on Multimedia MULTIMEDIA '98

Publisher: ACM Press

Full text available: pdf(798.80 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Many types of user would find it valuable to search collections of music via queries representing music

fragments, but such searching requires a reliable technique for identifying whether a provided fragment occurs within a piece of music. The problem of matching fragments to music is made difficult by the psychology of music perception, because literal matching may have little relation to perceived melodic similarity, and by the interactions between the multiple parts of typical piece ...

5 Towards the digital music library: tune retrieval from acoustic input



Rodger J. McNab, Lloyd A. Smith, Ian H. Witten, Clare L. Henderson, Sally Jo Cunningham
April 1996

Proceedings of the first ACM international conference on Digital libraries DL '96

Publisher: ACM Press

Full text available: pdf(998.45 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

Music is traditionally retrieved by title, composer or subject classification. It is possible, with current technology, to retrieve music from a database on the basis of a few notes sung or hummed into a microphone. This paper describes the implementation of such a system, and discusses several issues pertaining to music retrieval. We first describe an interface that transcribes acoustic input into standard music notation. We then analyze string matching requirements for ranked retrieval ...

Keywords: acoustic interfaces, melody recall, musical retrieval, relevance ranking

6 Music ranking techniques evaluated

Alexandra L. Uitdenbogerd, Justin Zobel

January 2002

Australian Computer Science Communications, Proceedings of the twenty-fifth

Australasian conference on Computer science - Volume 4 ACSC '02, Volume 24 Issue 1

Publisher: Australian Computer Society, Inc., IEEE Computer Society Press

Full text available: pdf(872.80 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In a music retrieval system, a user presents a piece of music as a query and the system must identify from a corpus of performances other pieces with a similar melody. Several techniques have been proposed for matching such queries to stored music. In previous work, we found that local alignment, a technique derived from bioinformatics, was more effective than the n-gram methods derived from information retrieval; other researchers have reported success with n-grams, but have not compared agains ...

Keywords: edit distances, manual and automatic queries, music matching techniques, n-gram matching

7 Applications 2: automated multimedia authoring: Automatic generation of personalized music sports video



Jinjun Wang, Changsheng Xu, Engsiong Chng, Lingyu Duan, Kongwah Wan, Qi Tian

November 2005

Proceedings of the 13th annual ACM international conference on Multimedia

MULTIMEDIA '05

Publisher: ACM Press

Full text available: pdf(633.40 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper, we propose a novel automatic approach for personalized music sports video generation. Two research challenges, semantic sports video content selection and automatic video composition, are addressed. For the first challenge, we propose to use multi-modal (audio, video and text) feature analysis and alignment to detect the semantic of events in sports video. For the second challenge, we propose video-centric and music-centric music video composition schemes to automatically generate ...

Keywords: automatic video editing, event detection, personalized music sports video, sports video analysis, video content selection

8 Towards a digital library of popular music



David Bainbridge, Craig G. Nevill-Manning, Ian H. Witten, Lloyd A. Smith, Rodger J. McNab

August 1999

Proceedings of the fourth ACM conference on Digital libraries DL '99

Publisher: ACM Press

Full text available: pdf(359.88 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: MIDI, melody matching, music libraries, music representation, optical music recognition

9 Multimedia: Peer-to-peer architecture for content-based music retrieval on acoustic data



Cheng Yang

May 2003

Proceedings of the 12th international conference on World Wide Web WWW '03

Publisher: ACM Press

Full text available:  pdf(146.73 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In traditional peer-to-peer search networks, operations focus on properly labeled files such as music or video, and the actual search is often limited to text tags. The explosive growth of available multimedia documents in recent years calls for more flexible search capabilities, namely search by content. Most content-based search algorithms are computationally intensive, making them inappropriate for a peer-to-peer environment. In this paper, we discuss a content-based music retrieval algorithm ...

Keywords: acoustic data, content-based music retrieval, distributed, load balancing, peer-to-peer, resource pooling

10 Technical session 3: audio processing: Searching notated polyphonic music using transportation distances



Rainer Typke, Remco C. Veltkamp, Frans Wiering

October 2004

Proceedings of the 12th annual ACM international conference on Multimedia MULTIMEDIA '04

Publisher: ACM Press

Full text available:  pdf(351.55 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We present a method for searching databases of symbolically represented polyphonic music that exploits advantages of transportation distances such as continuity and partial matching in the pitch dimension. By segmenting queries and database documents, we also gain partial matching in the time dimension. Thus, we can find short queries in long database documents, and have a method more robust against pitch and tempo fluctuations in the queries or database documents than we would with transport ...

Keywords: Earth mover's distance, melodic similarity, polyphonic matching, proportional transportation distance

11 Aspect composition and interaction: Symmetric composition of musical concerns



Patrick Hill, Simon Holland, Robin Laney

March 2006

Proceedings of the 5th international conference on Aspect-oriented software development AOSD '06

Publisher: ACM Press

Full text available:  pdf(206.81 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Aspect-oriented programming (AOP) describes a range of techniques that enable the separation, organisation and composition of various programming concerns that cannot be adequately encapsulated using the principal decomposition mechanisms available to modern programming languages. Naturally, most AOP-related research is focussed on its application to the development of computer software. However, we believe that it is worthwhile considering whether AOP and cognate techniques might be usefully ada ...

Keywords: aspect-oriented programming, multi-dimensional separation of concerns, music composition, music representation

12 Music-notation searching and digital libraries




Donald Byrd

January 2001

Proceedings of the 1st ACM/IEEE-CS joint conference on Digital libraries JCDL '01

Publisher: ACM Press

Full text available:  pdf(245.26 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Almost all work on music information retrieval to date has concentrated on music in the audio and event (normally MIDI) domains. However, music in the form of notation, especially Conventional Music Notation (CMN), is of much interest to musically-trained persons, both amateurs and professionals, and searching CMN has great value for digital music libraries. One obvious reason little has been done on music retrieval in CMN form is the overwhelming complexity of CMN, which requires a very s ...

13 Content-based retrieval for music collections




Yuen-Hsien Tseng

August 1999

Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval SIGIR '99

Publisher: ACM Press

Full text available:  pdf(99.27 KB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: approximate string matching, key melody extraction, music indexing, music retrieval, pitch profile encoding, query suggestion

14 Applications 6 - querying and recommending media: QueST: querying music databases by acoustic and textual features



Bin Cui, Ling Liu, Calton Pu, Jialie Shen, Kian-Lee Tan

September 2007 **Proceedings of the 15th international conference on Multimedia MULTIMEDIA '07**

Publisher: ACM Press

Full text available: pdf(229.62 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

With continued growth of music content available on the Internet, music information retrieval has attracted increasing attention. An important challenge for music searching is its ability to support both keyword and content based queries efficiently and with high precision. In this paper, we present a music query system - *QueST* (*Query by acouSTic and Textual features*) to support both keyword and content based retrieval in large music databases. *QueST* has two ...

Keywords: acoustic feature, music, search, similarity notion, textual feature

15 Posters: Synchronized background music generation for video



Jong-Chul Yoon, In-Kwon Lee

June 2007 **Proceedings of the international conference on Advances in computer entertainment technology ACE '07**

Publisher: ACM Press

Full text available: pdf(1.79 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We synchronize background music with a video by changing the timing of music, an approach that minimizes the damage to music data. Starting from a MIDI file and video data, feature points are extracted from both sources, paired, and then synchronized using dynamic programming to time-scale the music. We also introduce the music graph, a directed graph that encapsulates connections between many short music sequences. By traversing a music graph, we can generate large amounts of new background m ...

Keywords: music graph, music-video synchronization

16 Music digital libraries: A comparison of melodic database retrieval techniques using sung queries



Ning Hu, Roger B. Dannenberg

July 2002 **Proceedings of the 2nd ACM/IEEE-CS joint conference on Digital libraries JCDL '02**

Publisher: ACM Press

Full text available: pdf(248.70 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Query-by-humming systems search a database of music for good matches to a sung, hummed, or whistled melody. Errors in transcription and variations in pitch and tempo can cause substantial mismatch between queries and targets. Thus, algorithms for measuring melodic similarity in query-by-humming systems should be robust. We compare several variations of search algorithms in an effort to improve search precision. In particular, we describe a new frame-based algorithm that significantly outperforms ...

Keywords: dynamic programming, melodic comparison, melodic search, music information retrieval (MIR), sung query

17 Applications 6 - querying and recommending media: Scalable music recommendation by search



Rui Cai, Chao Zhang, Lei Zhang, Wei-Ying Ma

September 2007 **Proceedings of the 15th international conference on Multimedia MULTIMEDIA '07**

Publisher: ACM Press

Full text available: pdf(361.46 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The growth of music resources on personal devices and Internet radio has increased the need for music recommendations. In this paper, aiming at providing an efficient and general solution, we present a search-based solution for scalable music recommendations. In this solution a music piece is first transformed to a music signature sequence in which each signature characterizes the timbre of a local music clip. Based on such signatures, a scale-sensitive method is then proposed to index the mu ...

Keywords: automated playlist generation, content-based music search, locality sensitive hashing (LSH), music signature, music snippet, scalable music recommendation

18 Music information retrieval: Music score alignment and computer accompaniment



Roger B. Dannenberg, Christopher Raphael

August 2006 **Communications of the ACM**, Volume 49 Issue 8

Publisher: ACM Press

Full text available:  pdf(846.33 KB)Additional Information: [full citation](#), [appendices and supplements](#), [abstract](#), [references](#), [index terms](#)

By relating musical sound to musical notation, these systems generate tireless, expressive musical accompaniment to follow and sometimes learn from a live human performance.

19 [A tool for content based navigation of music](#)

Steven Blackburn, David DeRoure

September 1998 **Proceedings of the sixth ACM international conference on Multimedia MULTIMEDIA '98**

Publisher: ACM Press

Full text available:  pdf(892.75 KB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)


Keywords: branching audio, content based navigation, melodic contours, open hypermedia, pitch contours, query by humming

20 [Music and digital libraries: from users to algorithms: Content-based indexing of musical scores](#)

Richard A. Medina, Lloyd A. Smith, Deborah R. Wagner

May 2003 **Proceedings of the 3rd ACM/IEEE-CS joint conference on Digital libraries JCDL '03**

Publisher: IEEE Computer Society

Full text available:  pdf(118.63 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes a method of automatically creating a content-based index of musical scores. The goal is to capture the themes, or motifs, that appear in the music. The method was tested by building an index of 25 orchestral movements from the classical music literature. For every movement, the system captured the primary theme, or a variation of the primary theme. In addition, it captured 13 of 28 secondary themes. The resulting index was 14% of the size of the database. A further reduction ...

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IEEE JNL IEEE Journal or Magazine

IET JNL IET Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IET CNF IET Conference Proceeding

IEEE STD IEEE Standard

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Volume 4, 3-7 Sept. 2000 Page(s):230 - 233 vol.4
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Krasny, L.; Koorapaty, H.;
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Volume 3, 16-20 May 1999 Page(s):2373 - 2377 vol.3
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7-9 Dec. 1998 Page(s):364 - 369
Digital Object Identifier 10.1109/MMSP.1998.738963
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Digital Object Identifier 10.1109/NRC.1998.678005

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Volume 4, 21-24 April 1997 Page(s):3329 - 3332 vol.4
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Volume 4, 21-24 April 1997
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De Jong, Y.L.C.; Herben, M.H.A.J.;
[Personal, Indoor and Mobile Radio Communications, 1997. 'Waves of the Year 2000'. PIMRC '97., The 8th IEEE International Symposium on](#)
Volume 2, 1-4 Sept. 1997 Page(s):645 - 649 vol.2
Digital Object Identifier 10.1109/PIMRC.1997.631111
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IEEE JNL	IEEE Journal or Magazine
IET JNL	IET Journal or Magazine
IEEE CNF	IEEE Conference Proceeding
IET CNF	IET Conference Proceeding
IEEE STD	IEEE Standard

- ☐ 1. **Selection of melody lines for music databases**
 Tang, M.; Yip Chi Lap; Kao, B.;
Computer Software and Applications Conference, 2000. COMPSAC 2000. The 24th Annual International
 25-27 Oct. 2000 Page(s):243 - 248
 Digital Object Identifier 10.1109/CMPSAC.2000.884725
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Refine Search

Your wildcard search against 10000 terms has yielded the results below.

Your result set for the last L# is incomplete.

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Search Results -

Terms	Documents
(search\$ and (post\$ near2 identif\$) and match\$ and (song\$ or artist\$) and visitor\$).clm.	0

Database:

US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Thursday, October 11, 2007 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u> side by side	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
	DB=PGPB,USPT; PLUR=YES; OP=OR		
<u>L5</u>	(search\$ and (post\$ near2 identif\$) and match\$ and (song\$ or artist\$) and visitor\$).clm.	0	<u>L5</u>
<u>L4</u>	((post\$ near2 identif\$) and (song\$1 or artist) and server\$ and (visistor\$1) and match\$).clm.	0	<u>L4</u>
<u>L3</u>	((input\$ near2 form\$1) and (voice adj clip\$1) and microphone and (client\$ or user\$1)).clm.	0	<u>L3</u>
<u>L2</u>	(post\$ and (voice adj clip\$1) and server\$ and search\$ and match\$).clm.	0	<u>L2</u>
<u>L1</u>	((identif\$ near2 (song\$1 or artist\$)) and (input\$ or sing or hum) and client\$ and server\$ and Internet).clm.	3	<u>L1</u>

END OF SEARCH HISTORY

Interference Search

WEST Search History

Hide Items

Restore

Clear

Cancel

DATE: Thursday, October 11, 2007

Hide?	Set Name	Query	Hit Count
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L130	6353174.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L129	20040093249	1
<input type="checkbox"/>	L128	20010025259 20040093249t	1
		<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L127	('4996642' '5790426' '5884282' '6041311' '6064980' '6092049' '6317722' '6370513' '6412012' '6438579' '6636836' '6801909')![pn]	12
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L126	(6,678,680 6,539,395 7,075,000).pn.	3
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L125	20020073098	1
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L124	6975995.pn.	1
<input type="checkbox"/>	L123	7233787.pn.	1
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L122	L94 and (song\$1 or (voice adj clip)) with (server\$ or host\$)	34
<input type="checkbox"/>	L121	L94 and ((send\$ or forward\$ or provid\$) near2 \$clip) with (server or host)	0
<input type="checkbox"/>	L120	L94 and ((send\$ or forward\$ or provid\$) near2 \$clip) with (server or host)	0
<input type="checkbox"/>	L119	L94 and ((send\$ or forward\$ or provid\$) near2 \$clip) with (server or host)	0
<input type="checkbox"/>	L118	L117 and (voice adj clip\$)	0
<input type="checkbox"/>	L117	L116 and (input\$ same microphone)	35
<input type="checkbox"/>	L116	L101 and (download\$ same (web\$ or www or html or internet))	37
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L115	6096962.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L114	2003073491	0
<input type="checkbox"/>	L113	200307349	0
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L112	L99 and (electronic adj notification) same server\$1	0
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L111	6539395.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L110	20020073098	1
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	

<input type="checkbox"/>	L109	L104 and (select\$ near2 music) with type\$1	0
<input type="checkbox"/>	L108	L94 and (select\$ near2 music)	187
<input type="checkbox"/>	L107	L104 and L94	0
<input type="checkbox"/>	L106	L104 not L94	184
<input type="checkbox"/>	L105	L104 and L93	0
<input type="checkbox"/>	L104	(voice adj clip)	184
<input type="checkbox"/>	L103	L94 and (voice adj clip\$1)	0
		<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L102	('4843562' '5210820' '5428732' '5616876' '5619709' '6026439' '6049777' '6061680' '6085226' '6154773' '6195622' '6230207' '6289353' '6347315' '6370526' '6516308' '6523026' '6526411' '6605770' '6658423' '6766316' '20030028796' '20030086341' '20030095660')![pn]	24
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L101	L100 and client\$1	57
<input type="checkbox"/>	L100	L99 and server\$1	85
<input type="checkbox"/>	L99	L93 and (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	85
<input type="checkbox"/>	L98	L94 and (voice adj clip\$)	0
<input type="checkbox"/>	L97	L94 and ((music adj type\$1) near10 (display\$ or present\$ or select\$))	6
<input type="checkbox"/>	L96	L94 and ((select\$ or pick\$ or chos\$)near10 (music adj type\$1))	0
<input type="checkbox"/>	L95	L94 and (voice adj clip) near5 (submit\$ or request\$ or display\$ or present\$) same server\$1	0
<input type="checkbox"/>	L94	L93 and ((select\$ near2 music) same (list\$ or (pull-down)))	187
<input type="checkbox"/>	L93	L92 and ((sing\$ or input\$ or enter\$) same microphone\$1)	1708
<input type="checkbox"/>	L92	(input\$ or enter\$ or determin\$ or identif\$) near2 (song\$1 or music or artist\$1)	9230
<input type="checkbox"/>	L91	(voice adj clip\$) and ((identificat\$ or determin\$1) near2 (song\$1 or artist\$1))	0
<input type="checkbox"/>	L90	((music near2 type\$1) same information same(selection adj list\$1))	0
<input type="checkbox"/>	L89	((music near2 type\$1) with information with (selection adj list\$1))	0
<input type="checkbox"/>	L88	notificat\$ same (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	26
<input type="checkbox"/>	L87	(voice adj clip) and (song\$1 near2 (name\$1 or artist\$1))	3
<input type="checkbox"/>	L86	(voice adj clip) same (song\$1 near2 (name\$1 or artist\$1))	0
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L85	6539395.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L84	20020073098	1
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L83	L82 and @pd > 20070612	0
<input type="checkbox"/>	L82	(4,807,169 5,233,520 5,583,763 5,704,017 5,724,567 5,749,081 5,832,446 5,884,282 5,899,502 5,918,223 5,978,766 5,960,440 5,963,948 5,979,757 5,999,975 6,012,051 6,018,738 6,020,883 6,046,021 6,112,186 6,236,974 6,236,990 6,370,513).pn.	23
<input type="checkbox"/>	L81	6657116.pn.	1
<input type="checkbox"/>	L80	(6,061,680 5,557,541 or 5441047).pn.	3
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L79	((song\$1 or artist\$1 or composer\$1) near2 (identif\$ or determin\$ or notif\$)) with (url\$ or	9

	hyperlink\$1 or link\$1) with (music or audio or video)	
<input type="checkbox"/>	L78 ((song\$1 or artist\$1 or composer\$1) near2 (identif\$ or determin\$ or notif\$)) same (url\$ or hyperlink\$1 or link\$1) same (music or audio or video)	131
<input type="checkbox"/>	L77 L76 and L16	16
<input type="checkbox"/>	L76 L75 or L74 or L3 or L72 or L71	334811
<input type="checkbox"/>	L75 707/(6,102.1,104).ccls.	115393
<input type="checkbox"/>	L74 709/(200,202,203,209).ccls.	103161
<input type="checkbox"/>	L73 84/(609,649,668).ccls.	1485643
<input type="checkbox"/>	L72 715/(500.1,501.1,513,523,526).ccls.	104117
<input type="checkbox"/>	L71 345/\$.ccls.	88898
<input type="checkbox"/>	L70 L57 and (electronic adj notification) same server\$1 <i>DB=USPT; PLUR=YES; OP=OR</i>	0
<input type="checkbox"/>	L69 6539395.pn. <i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	1
<input type="checkbox"/>	L68 20020073098 <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	1
<input type="checkbox"/>	L67 L62 and (select\$ near2 music) with type\$1	0
<input type="checkbox"/>	L66 L52 and (select\$ near2 music)	187
<input type="checkbox"/>	L65 L62 and L52	0
<input type="checkbox"/>	L64 L62 not L52	184
<input type="checkbox"/>	L63 L62 and L51	0
<input type="checkbox"/>	L62 (voice adj clip)	184
<input type="checkbox"/>	L61 L52 and (voice adj clip\$1) <i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>	0
<input type="checkbox"/>	L60 ('4843562' '5210820' '5428732' '5616876' '5619709' '6026439' '6049777' '6061680' '6085226' '6154773' '6195622' '6230207' '6289353' '6347315' '6370526' '6516308' '6523026' '6526411' '6605770' '6658423' '6766316' '20030028796' '20030086341' '20030095660')![pn] <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	24
<input type="checkbox"/>	L59 L58 and client\$1	57
<input type="checkbox"/>	L58 L57 and server\$1	85
<input type="checkbox"/>	L57 L51 and (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	85
<input type="checkbox"/>	L56 L52 and (voice adj clip\$)	0
<input type="checkbox"/>	L55 L52 and ((music adj type\$1) near10 (display\$ or present\$ or select\$))	6
<input type="checkbox"/>	L54 L52 and ((select\$ or pick\$ or chos\$)near10 (music adj type\$1))	0
<input type="checkbox"/>	L53 L52 and (voice adj clip) near5 (submit\$ or request\$ or display\$ or present\$) same server\$1	0
<input type="checkbox"/>	L52 L51 and ((select\$ near2 music) same (list\$ or (pull-down)))	187
<input type="checkbox"/>	L51 L50 and ((sing\$ or input\$ or enter\$) same microphone\$1)	1708
<input type="checkbox"/>	L50 (input\$ or enter\$ or determin\$ or identif\$) near2 (song\$1 or music or artist\$1)	9230
<input type="checkbox"/>	L49 (voice adj clip\$) and ((identificat\$ or determin\$1) near2 (song\$1 or artist\$1))	0
<input type="checkbox"/>	L48 ((music near2 type\$1) same information same(selection adj list\$1))	0
<input type="checkbox"/>	L47 ((music near2 type\$1) with information with (selection adj list\$1))	0

<input type="checkbox"/>	L46	notificat\$ same (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	26
<input type="checkbox"/>	L45	(voice adj clip) and (song\$1 near2 (name\$1 or artist\$1))	3
<input type="checkbox"/>	L44	(voice adj clip) same (song\$1 near2 (name\$1 or artist\$1))	0
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L43	6539395.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L42	20020073098	1
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L41	L40 and L25	39
<input type="checkbox"/>	L40	((song\$1 or artist\$1) near2 (identif\$ or determin\$ or notif\$)) same(hyperlink\$1 or link\$1 or url\$ or Web\$) same music	166
<input type="checkbox"/>	L39	((song\$1 or artist\$1) near2 (identif\$ or determin\$ or nofif\$)) with (hyperlink\$1 or link\$1 or url\$) with music	4
		<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L38	('5441047' '5475845' '5701904' '5724983' '5740549' '5774170' '5857191' '6002393' '6029045' '6050940' '6112181' '6115040' '6286051' '6389467')![pn]	14
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L37	L36 and L16	30
<input type="checkbox"/>	L36	L35 or L34 or L33 or L32 or L31 or L30	1752525
<input type="checkbox"/>	L35	(707/104.1).cccls.	6662
<input type="checkbox"/>	L34	707/(6,102).cccls.	115393
<input type="checkbox"/>	L33	709/(200, 202,203).cccls.	103161
<input type="checkbox"/>	L32	84/(609,649,668).cccls.	1485643
<input type="checkbox"/>	L31	715/(500.1,501.1,514,526).cccls.	104117
<input type="checkbox"/>	L30	345/\$.cccls.	88898
<input type="checkbox"/>	L29	L16 and (electronic adj notification) same server\$1	0
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L28	6539395.pn.	1
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L27	20020073098	1
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L26	L21 and (select\$ near2 music) with type\$1	0
<input type="checkbox"/>	L25	L11 and (select\$ near2 music)	187
<input type="checkbox"/>	L24	L21 and L11	0
<input type="checkbox"/>	L23	L21 not L11	184
<input type="checkbox"/>	L22	L21 and L10	0
<input type="checkbox"/>	L21	(voice adj clip)	184
<input type="checkbox"/>	L20	L11 and (voice adj clip\$1)	0
		<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L19	('4843562' '5210820' '5428732' '5616876' '5619709' '6026439' '6049777' '6061680' '6085226' '6154773' '6195622' '6230207' '6289353' '6347315' '6370526' '6516308' '6523026' '6526411' '6605770' '6658423' '6766316' '20030028796' '20030086341' '20030095660')![pn]	24

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

<input type="checkbox"/>	L18	L17 and client\$1	57
<input type="checkbox"/>	L17	L16 and server\$1	85
<input type="checkbox"/>	L16	L10 and (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	85
<input type="checkbox"/>	L15	L11 and (voice adj clip\$)	0
<input type="checkbox"/>	L14	L11 and ((music adj type\$1) near10 (display\$ or present\$ or select\$))	6
<input type="checkbox"/>	L13	L11 and ((select\$ or pick\$ or chos\$)near10 (music adj type\$1))	0
<input type="checkbox"/>	L12	L11 and (voice adj clip) near5 (submit\$ or request\$ or display\$ or present\$) same server\$1	0
<input type="checkbox"/>	L11	L10 and ((select\$ near2 music) same (list\$ or (pull-down)))	187
<input type="checkbox"/>	L10	L9 and ((sing\$ or input\$ or enter\$) same microphone\$1)	1708
<input type="checkbox"/>	L9	(input\$ or enter\$ or determin\$ or identif\$) near2 (song\$1 or music or artist\$1)	9230
<input type="checkbox"/>	L8	(voice adj clip\$) and ((identificat\$ or determin\$1) near2 (song\$1 or artist\$1))	0
<input type="checkbox"/>	L7	((music near2 type\$1) same information same(selection adj list\$1))	0
<input type="checkbox"/>	L6	((music near2 type\$1) with information with (selection adj list\$1))	0
<input type="checkbox"/>	L5	notificat\$ same (hyperlink\$ or url or anchor\$1) same (song\$1 or artist\$1)	26
<input type="checkbox"/>	L4	(voice adj clip) and (song\$1 near2 (name\$1 or artist\$1))	3
<input type="checkbox"/>	L3	(voice adj clip) same (song\$1 near2 (name\$1 or artist\$1))	0

DB=USPT; PLUR=YES; OP=OR

<input type="checkbox"/>	L2	6539395.pn.	1
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DB=PGPB,USPT; PLUR=YES; OP=OR

<input type="checkbox"/>	L1	20020073098	1
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END OF SEARCH HISTORY